Patent claims

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Method for Constructing a Structure

- 1. Method for constructing a linear and/or punctiform structure on a support, especially for constructing strip-like electrically conducting contacts on a semiconductor component such as a solar cell, by applying an electrically conducting paste-like substance containing a solvent adhering to a support and subsequent hardening of the substance, wherein, after the substance is applied to the support, a medium containing a polar molecule is applied on the support and/or the substance, through which the solvent contained in the substance is extracted.
- Method according to claim 1, wherein the medium is applied on the support to the extent that a flowing of the substance along the support is prevented or largely prevented while avoiding a detachment of the substance from the support.
 - 3. Method according to claim 1, wherein the forces of the adhesion between the medium and the support are greater than the forces of adhesion between the substance and the support.
 - 4. Method according to at least one of the preceding claims, wherein water and anionic surfactants such as soap, fatty alcohol sulfates, alkyl benzene sulfonates and/or cationic surfactants such as invert soap and/or amphoteric surfactants and/or non-ionic surfactants such as non-carbonic acid ester of polyalcohols is used as the surfactant medium.
- 5. Method according to claim 4, wherein the surfactant medium is applied on the support in the form of a liquid or a foam in the region of the applied paste-like substance.
 - 6. Method according to claim 1, wherein the paste-like substance is applied to the support preferably by means of screen printing, tampon printing, finger writing techniques and/or spraying techniques.
- 7. Method according to claim 1, wherein the medium is applied to the support and/or the substance within a time interval Δt after applying the substance, whereby the time interval Δt comes to ca. 0.1 seconds to ca. 600 seconds, preferably ca. 1 second to ca. 60 seconds.
- 8. Method according to at least one of the preceding claims, wherein the substance is applied to the support such that a diameter d with in particular 15 μ m \leq d \leq 300 μ m,

preferably ca. 80 µm, results.

 $t_1 = \tau$

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- 9. Method according to claim 1, wherein water soluble and water insoluble solvents are added to the substance.
- 10. Method according to claim 1, wherein the substance is applied punctiform, linearly or strip-like to the support in such as way that the hardened substance has a height to breadth ratio a with in particular $0.1 \le a \le 1.0$, especially a ca. 0.3.
- 11. Method according to claim 1, wherein a silicon substrate with a surface layer consisting of silicon oxide and/or silicon nitride is used as a support.
- Method according to claim 1, wherein a concentration gradient between the medium to be applied to the support and/or the substance and the substance is set with respect to the solvents present in the substance such that the solvent of the substance is extracted from the medium.